

What is claimed is:

- 1           1. Apparatus for automatically dispensing a fluid comprising:
  - 2           a) a container adapted to carry a supply of fluid;
  - 3           b) a valve connected to said container, wherein actuation of said valve  
4           dispenses the fluid;
  - 5           c) an apparatus position indicator proximally associated with said  
6           container;
  - 7           d) an object sensor positioned near said valve, wherein said object sensor  
8           monitors an area below where said valve dispenses when open and  
9           upon detection of an object opens said valve; and
  - 10          e) wherein initial positioning of the apparatus triggers said apparatus  
11          position indicator to generate an appropriate signal until said object  
12          sensor is properly positioned.
- 1           2. The apparatus according to Claim 1, wherein said apparatus position  
2           indicator includes at least one illumination device that illuminates when said  
3           object sensor is properly positioned.
- 1           3. The apparatus according to Claim 1, wherein said apparatus position  
2           indicator includes at least one illumination device that illuminates until said  
3           object sensor is properly positioned.
- 1           4. A method for installing an automated fluid dispenser, comprising:
  - 2           a) providing a fluid dispenser for carrying a container, a valve connected  
3           to said container wherein actuation of said valve dispenses a fluid  
4           carried by said container when installed, an apparatus position  
5           indicator carried by said fluid dispenser, and an object sensor  
6           positioned near said valve;
  - 7           b) connecting a power source to at least said apparatus position indicator  
8           and said object sensor;

- 1 c) positioning said fluid dispenser in at least one prospective mounting  
2 location;  
3 d) emitting from said object sensor a test signal to ensure proper  
4 positioning of said fluid dispenser; and  
5 e) repeating steps c) and d) until said apparatus position indicator  
6 provides a positive indication of said fluid dispenser's placement.

- 1 5. The method according to Claim 4, further comprising:  
2 marking a position of said fluid dispenser's positive placement; and  
3 permanently installing said fluid dispenser at said position.

- 1 6. The method according to Claim 5, further comprising:  
2 installing said container in said fluid dispenser.

- 1 7. Apparatus for dispensing a measured quantity of fluid, comprising:  
2 a) an object sensor;  
3 b) a container carrying a supply of fluid;  
4 c) a dispense mechanism coupled to said container to control an amount  
5 of fluid to be dispensed;  
6 d) a pump actuator mechanism coupled to said object sensor, wherein  
7 detection of an object by said object sensor cycles said pump actuator  
8 mechanism to engage said dispense mechanism which dispenses a  
9 measured quantity of fluid; and  
10 e) a hidden switch carried by said container, wherein actuation of said  
11 hidden switch enables a processor to enter an operational feature mode.  
12

- 1 8. The apparatus accordingly to Claim 7, further comprising:  
2 at least one illuminating indicia connected to said processor wherein  
3 entry into said operational feature mode is indicated by said at least one  
4 illuminating indicia.

1           9.    The apparatus according to Claim 8, further comprising:  
2                    at least two lights, wherein said lights are sequentially illuminated to  
3                    indicate where an object should be placed for receipt of the fluid; and  
4                    wherein entry into said operational feature mode allows enablement or  
5                    disablement of said at least two lights.

1           10. The apparatus according to Claim 8 wherein entry into said operational  
2                    feature mode allows selection of a number of cycles of said pump actuator  
3                    mechanism to control an amount of dispensed fluid upon detection of an  
4                    object.

1           11. The apparatus according to Claim 8 wherein entry into said operational  
2                    feature mode allows selection of a size of said dispense mechanism.

1           12. The apparatus according to Claim 8, further comprising:  
2                    a low level indicator connected to said processor,  
3                    wherein entry into said operational feature mode allows selection of a  
4                    number of cycles of said pump actuator mechanism to control an amount of  
5                    dispensed fluid upon detection of an object,  
6                    wherein entry into said operational feature allows selection of a size of  
7                    said dispense mechanism, and  
8                    wherein said processor calculates when the fluid in a given size of  
9                    container will be depleted to a predetermined level based upon said number  
10                  of cycles and size of said dispense mechanism.

1           13. The apparatus according to Claim 8, further comprising:  
2                    a timer connected to said processor, said timer initiated upon actuation  
3                    of said hidden button to allow for servicing of the apparatus.

1 14. The apparatus according to Claim 13, wherein said object sensor is disabled  
2 while said timer is running.

1 15. The apparatus according to Claim 14, wherein said object sensor is re-  
2 enabled upon either expiration of said timer or re-actuation of said hidden  
3 switch.

1 16. Apparatus for dispensing a measured quantity of fluid, comprising:  
2 a) a container carrying a supply of fluid;  
3 b) a dispense mechanism coupled to said container to control an amount  
4 of fluid to be dispensed;  
5 c) a pump actuator mechanism coupled to said object sensor, wherein  
6 detection of an object by said object sensor cycles said pump actuator  
7 mechanism to engage said dispense mechanism which dispenses a  
8 measured quantity of fluid; and  
9 d) a timer having a predetermined period of time, said timer associated  
10 with said dispense mechanism, said timer actuated upon dispensing of  
11 said dispense mechanism, said dispense mechanism disabled if a  
12 predetermined number of dispense events occur within said  
13 predetermined period of time.

1 17. The apparatus according to claim 16, wherein said dispense mechanism is  
2 re-enabled upon completion of a second period of time.

1 18. The apparatus according to claim 17, wherein said predetermined period of  
2 time is about 15 seconds and said predetermined number of dispense events  
3 is about 5.

1 19. The apparatus according to claim 17, wherein said second period of time is  
2 about 45 seconds.

- 1           20. Apparatus for dispensing a measured quantity of fluid, comprising:  
2           a) an object sensor which generates an object signal upon detection of an  
3           object;  
4           b) a container carrying a supply of fluid;  
5           c) a dispense mechanism coupled to said container to control an amount  
6           of fluid to be dispensed;  
7           d) a pump actuator mechanism coupled to said object sensor, wherein  
8           detection of an object by said object sensor cycles said pump actuator  
9           mechanism to engage said dispense mechanism which dispenses a  
10          measured quantity of fluid and wherein said pump actuator mechanism  
11          converts rotational motion to linear motion to cycle said dispense  
12          mechanism; and  
13          e) a control circuit having a processor to receive said object signal,  
14          wherein said processor generates a cycle signal received by said pump  
15          actuator mechanism to actuate said dispense mechanism.

- 1           21. The apparatus according to Claim 20, further comprising:  
2           a motor carried by said pump actuator mechanism, wherein a motor  
3           drive input signal is generated by said processor;  
4           a motor sensor coupled to said pump actuator, said motor sensor  
5           detecting a position of said motor and generating a brake input signal when  
6           said motor position is detected,  
7           wherein generation of said brake input signal connects said motor  
8           drive input signal to ground to effectively brake said motor.

- 1           22. The apparatus according to Claim 20, further comprising:  
2           a motor carried by said pump actuator mechanism, wherein a motor  
3           drive signal is generated by said processor to actuate said motor and said  
4           pump actuator mechanism;  
5           an overload circuit carried by said control circuit, wherein if said  
6           overload circuit detects a voltage value in excess of a predetermined

1 threshold, an overload signal is generated and received by said processor  
2 which in turn stops generation of said motor drive signal.

1 23. The apparatus according to Claim 20, wherein said control circuit  
2 comprises:

3 a sensor circuit for carrying said object sensor; and

4 a systems circuit for carrying said processor, wherein said sensor  
5 circuit and said systems circuit are maintained on their own respective circuit  
6 boards to minimize interference therebetween.

1 24. The apparatus according to said Claim 23, wherein each said respective  
2 circuit board functions as a shielded backplane.